

STUDIES IN AUSTRALIAN ENTOMOLOGY.

No. xviii. NEW GENERA AND SPECIES OF CARABIDAE.

(Scaritini, Pterostichini, Merizodini, Bembidiini, Trechini, Odacanathini, Panagaeini, Licinini, and Lebiini.)

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(Continued from Vol. xl., 1915, p. 473.*)

[Read 28th March, 1923.]

Tribe **Scaritini**.Genus **DYSCHIRIUS**.

Table of Australian Species.

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|----|------|--|---|
| 1 | (2) | Colour uniformly black. Length, 2.5 mm. | } <i>mastersi</i> Macl.
<i>stephensi</i> Macl. |
| 2 | (1) | Colour not wholly black. | |
| 3 | (4) | Elytra reddish testaceous with a broad central black fascia. Length, 3.5 mm. | } <i>zonatus</i> . |
| 4 | (3) | Elytra never with a central black fascia. | |
| 5 | (8) | Size major. Length, 4 mm. | |
| 6 | (7) | Head and pronotum (except peduncle) ferruginous red. | } <i>torrensensis</i> Blackb. |
| 7 | (6) | Head (except clypeus) and pronotum black. | |
| 8 | (5) | Size minor. | } <i>macleayi</i> Sl. |
| 9 | (10) | Black; elytra with two sanguineous maculae behind middle; striae not extending behind transverse basal depression. Length, 2-2.3 mm. | |
| | | | } <i>ovensensis</i> Blackb. |
| 10 | (9) | Prothorax piceous black, elytra ferruginous brown; striae extending backwards to ante-apical maculae. Length, 2.5-3 mm. | |
| | | | } <i>wilsoni</i> Sl. |

In arranging this table I have not had before me *D. stephensi* Macl., *D. zonatus* Putz., and *D. torrensensis* Blackb., but have relied on the descriptions of these species for the differences mentioned.

DYSCHIRIUS WILSONI, n.sp.

Elongate-oval, convex. Piceous, head and pronotum black; elytra ferruginous brown with a transverse reddish macula on each elytron above apical declivity; under surface of a dull reddish colour; antennae infusate with basal joint livid; legs reddish, apex of femora, base of tibiae, and tarsi infusate.

Vertex smooth, convex; front defined posteriorly by a transverse straight ridge turned obliquely backward near each eye, a fine longitudinal median ridge, a transverse sulcus (on each side of median ridge before the posterior ridge), and a juxta-ocular sulcus on each side; clypeus declivous, emarginate, lateral

*There is no number xiii. in this series, so that No. xiv. follows No. xii.

angles slightly prominent, supra-antennal plates large, convex. Prothorax globose, pedunculate, laevigate, nitid; basal channel defining peduncle. Elytra truncate-oval, very convex, lightly transversely impressed at basal third, punctate-striate on basal half (before maculae); striae shorter on sides than on disc; interstices a little convex before transverse impressions, 3, 5, and 7 seriatly setigero-punctate; lateral channel narrow, punctate, wider and with larger punctures near base; border narrow, forming a minute denticule at humeral angle. Anterior tibiae with apical digitation long, narrow, pointed, two outer teeth small, dentiform. Transverse suture of metasternum marked by a row of six large punctures. Length, 2.5—3 mm.; breadth, 0.9—1.05 mm.

Hab.—Victoria: Beaconsfield, near Melbourne. Several specimens were taken by Mr. F. E. Wilson in tussocks of grass—Colls. Wilson and Sloane.

Closely allied to *D. stephensi* Macl., and *D. ovensensis* Blackb., which it resembles in form of head and prothorax. From *D. stephensi* and *D. mastersi* Macl. it differs by colour not wholly black; the prothorax is proportionally wider and more rounded on sides than in *D. stephensi*. From *D. ovensensis* it differs by colour; elytra with striae reaching back to the maculae. In *D. ovensensis* the inner striae are shorter than the outer ones. It is at once differentiated from *D. torrensensis* Blackb., and *D. macleayi* Sl. by its smaller size.

Genus CLIVINA.

CLIVINA SULCATICEPS, n.sp.

Narrow, cylindrical. Head narrow (1.3 mm. across eyes), depressed, longitudinally trisulcate on each side of vertex, clypeus widely and decidedly emarginate, not divided from the rounded lateral parts, mandibles long, prominent, decussate, labrum 5-setose; prothorax longer than broad, evidently narrowed to apex; elytra parallel, striate, stria 4 joining 5 at base, interstice 8 carinate at base, not raised at apex; peduncle with lateral cavities punctate; prosternum with intercoxal part wide, pro-episterna transversely rugulose and punctate; anterior tibiae 4-dentate, lower side with a strong transverse ridge beneath second external tooth. Castaneous, head and prothorax darker than elytra.

Head elongate, impunctate, nitid: clypeus smooth, strongly divided from front in middle, raised into a transverse ridge between frontal impressions; lateral parts depressed, not defined from median part or supra-antennal plates, rounded and decidedly more prominent than median part: eyes small, round, lightly convex. Prothorax narrow (2 x 1.7 mm.), widest near posterior angles, lightly narrowed to apex (1.5 mm.), convex; disc laevigate, subrugulose on sides; anterior margin lightly emarginate in middle; anterior border strongly developed; anterior angles near head, narrow, prominent; posterior angles rounded; median and anterior lines strongly impressed. Elytra cylindrical (4.5 x 2 mm.), deeply striate; striae crenulate. Length, 8.8; breadth, 2 mm.

Hab.—Northern Territory: Alligator River. Type in National Museum, Melbourne.

It has seemed better not to formulate a new genus for this aberrant species, but to leave it in *Clivina*, where it will form the type of a new group. The form of the anterior tibiae, with their transverse ridge on lower side, has not been seen by me elsewhere in the genus *Clivina*, but occurs in the South American genus

Oxystomus, while the striated head recalls that of *Schizogenius*. The form of the maxillary palps and mentum resembles those of *Clivina planiceps* Putz., but the mentum has not the longitudinal ridges of the lobes as in that species.

Genus LACCOSCAPHUS.

LACCOSCAPHUS CYANEUS Fabr., var. AENESCENS, n.var.

Differs from the typical form of *L. cyaneus* Fabr., by having the upper surface of a coppery bronze colour. Length, 10.5—12 mm.

Hab.—Queensland: Herberton District (Dodd). Colls. Sloane (type) and British Museum (cotype).

Note.—*L. cyaneus* varies considerably in size; specimens in my possession measure from 10.5 to 14 mm. in length. It ranges from Cairns at least as far north as Cooktown, and extends inland at least to Chillagoe.

Genus TERATIDIUM.

TERATIDIUM PARALLELUM, n.sp.

Elongate, cylindrical. Head convex, subquadrate, constricted posteriorly; posterior part of frontal impressions obsolescent. Nitid, black, elytra virescent with purple reflections; prothorax with slight viridescent and purple reflections towards base and sides.

Head large (4.5 mm. across eyes), two supra-orbital punctures on each side; front with a foveiform impression at each end of clypeal suture; occiput depressed below plane of vertex; clypeus strongly declivous, median part roundly emarginate; labrum emarginate; eyes deeply set in and not more prominent than orbits; orbits large, projecting strongly and almost rectangularly from sides of head, almost parallel on outer side, enclosing posterior two-thirds of eyes. Prothorax longer than broad (5.2 x 4.5 mm.), lightly angustate to base; sides parallel, lightly angustate just before base; anterior margin truncate, angles lightly and obtusely advanced; base arcuate, angles obtuse; border narrow, thicker and more raised on base; marginal channel narrow, bearing 2 or 3 punctures on anterior half and 2 punctures at beginning of basal curve on each side. Elytra laevigate, a shade wider than prothorax (10 x 4.6 mm.), a little depressed on disc, parallel; base emarginate, steeply declivous; lateral border thick and convex posteriorly, narrow upturned and rounded at humeral angles; a wide oblique punctate post-basal impression on each side. Ventral segments unipunctate on each side. Legs light; anterior tibiae with apex prominent, slender; a small dentiform prominence on outer side at base of apical digitation; posterior coxae and trochanters impunctate. Length, 20; breadth, 4.6 mm.

Hab.—Northern Territory: Adelaide River. Type in British Museum.

It belongs to the section of the genus in which the front is without strong sulci between the eyes. It is nearly allied to *T. convexum* Sl., the chief differences being the viridescent colour of the elytra, clypeus semicircularly emarginate behind the labrum (which is also roundly emarginate), orbits standing out more abruptly from head; prothorax with anterior angles more obtuse; elytra more parallel and more obtuse at apex; anterior tibiae wider, and with the small external denticule more developed.

Tribe **Pterostichini.****PHERSITA CRENULATA**, n.sp.

♀. Elliptical, rather depressed. Prothorax subquadrate, wider at base (1.85 mm.) than apex (1.4 mm.); elytra ovate, crenulate-striate, interstice 1 with a short striole at base, 3 unipunctate beside stria 3 at middle, 8 carinate towards apex, basal border dentate at shoulders. Piceous red.

Head convex, rather narrow (1.3 across eyes); front lightly and shortly bi-impressed, median space lightly convex; eyes (including orbits) reniform, small, convex but not prominent. Prothorax broader than long (1.7 x 2.1 mm.), widest before middle; sides lightly arcuate on anterior half, very lightly narrowed posteriorly, straight before base; apex lightly emarginate, angles obtuse, bordered; base wide, truncate, bordered, angles rectangular; basal area depressed, rather densely but finely punctate, the puncturation stronger in basal impressions; these wide, shallow, flat; lateral border narrow, reflexed; a narrow subcostate space dividing basal impressions from marginal channel. Elytra truncate-oval (4 x 2.8 mm.), lightly and widely convex; interstices depressed on disc, 7 convex; stria 7 fully developed. Ventral segments 4—6 with a row of closely set fine punctures along anterior margin, 6 plurisetose at apex. Length, 7.2; breadth, 2.8 mm.

Hab.—N.S. Wales: Mount Kosciusko. I found a single specimen near the Hotel Kosciusko (5,000 feet) on 6th December.

A distinct species. From *Ph. melbournensis* Cast., it differs by head narrower, eyes not nearly so prominent; prothorax longer, less rounded on arcuate part of sides, more lightly narrowed to base in a longer and more gentle slope, basal area more depressed and more punctate, basal impressions shallower and flatter; elytra proportionately longer, less convex, striae finer and shallower on disc, etc. From *Ph. tasmanica* Sl., it can be distinguished, *inter alia*, by prothorax less rounded on sides, basal area larger, more depressed and punctate.

Genus **PROSOPOGMUS.****PROSOPOGMUS OPACIDERMIS**, n.sp.

Elliptical, subdepressed. Prothorax angustate and sinuate posteriorly, wider at base (2 mm.) than apex (1.7 mm.); basal angles rectangular with apex blunted; elytra fully but not deeply striate, interstices (including 8) depressed, 5—7 narrower and lightly convex at apex, 3 tripunctate, 8 free at apex; met-episterna longer than broad. Black; head and prothorax nitid; elytra subnitid in ♂, subopaque in ♀; legs black, tibiae piceous; antennae, palpi and tarsi piceous red.

Head not large (1.65 mm. across eyes), convex; frontal impressions well marked; eyes reniform, rather prominent. Prothorax broader than long (♂, 2 x 2.3 mm.), lightly sinuately narrowed to base; sides lightly arcuate anteriorly; anterior angles obtuse, subprominent, bordered; base truncate; inner basal impression striolate, rather long, outer impression striolate, feeble, interspace flat; lateral border narrow, ending at basal angle; a seta beside basal angle inside border. Elytra oval (5 x 3 mm.); basal border a little raised above lateral border and feebly dentate at humeral angle; anterior puncture of interstice 3 beside stria 3, two posterior punctures beside stria 2; interstices 5 and 7 enclosing 6 at apex, 7—9 nearly equal in width. Prosternum bordered at base of intercoxal part.

♀. More robust than ♂; prothorax wider (2 x 2.5 mm.); elytra duller in colour.

Length, 8.5—9.5; breadth, 3—3.5 mm.

Hab.—N.S. Wales: Eccleston (J. Hopson).

This species can only be confused with *P. monochrous* Chaud., which it closely resembles in size and appearance, but it differs by prothorax narrower at base and more sinuate on sides; elytra less nitid in both sexes (especially ♀), interstices less convex in both sexes, depressed on disc in ♀, shagreened in both sexes (so strongly so as to be opaque in ♀), third interstice 3-punctate.

Note.—*P. opacidermis* is the only species of the genus in which I have been any variation in the number of punctures on the third interstice of the elytra; eight specimens are before me; of these, six have the third interstice normally 3-punctate, as described above; one of the remaining two specimens (♀) has the left elytron normally punctate, but only the middle puncture present on the right; the other has the two anterior punctures present on the left elytron, but only the middle puncture on the right.

PROSOPOGMUS INTERSTITIALIS, n.sp.

Parallel, elliptical. Prothorax subquadrate, wider at base (2 mm.) than apex (1.6 mm.), strongly bi-impressed on each side of base, basal angles almost rectangular; elytra strongly striate, interstices convex, 3 tri-punctate, 8 free at apex, met-episterna elongate. Black, nitid; femora piceous; tibiae, tarsi, and antennae piceous brown.

Head moderate (1.5 mm. across eyes), convex; frontal impressions well marked, short, extending across clypeus, divergent backward; eyes prominent, lightly enclosed behind; post-ocular parts of orbits small, but projecting sharply from head. Prothorax broader than long (1.8 x 2.2 mm.), widest a little before middle, depressed on disc; sides lightly curved, oblique near base; anterior angles narrow, obtuse, rather prominent; base lightly emarginate in middle, angles sub-rectangular with apex blunted; inner basal impressions subfoveiform, outer impressions foveate, deep; sometimes a few punctures in basal impressions; a seta just within basal angle. Elytra truncate-oval (4.2 x 2.75 mm.); humeral angles strongly marked, dentate; interstices convex, 1—4 more convex in ♂ than ♀, 3 with anterior puncture beside stria 3 and the two posterior ones beside stria 2, 6—8 enclosing 7 at apex, 7—9 subequal in width; a short stria at base of interstice 2. Prosternum bordered at base. Length, 7.2—7.5; breadth, 2.75 mm.

Hab.—N.S. Wales: Mount Wilson (Carter); Eccleston.

Closely allied to *P. oodiformis* Macl., from which it differs by elytra nitid (not shagreened), black (not olivaceous); prothorax proportionately narrower, especially towards base, basal impressions deeper; elytra more deeply striate, interstices convex, etc. Formerly I confused this species with *P. occidentalis* Macl., but that species is smaller, and has the basal foveae of the prothorax more punctate. In some lights a slight sub-violaceous flush may be noticed on the elytra, especially in ♂. I believe *P. interstitialis* extends from the Blue Mountains into Queensland, perhaps as far as the tropics.

Genus TRICHOSTERNUS.

TRICHOSTERNUS PERATER, n.sp.

Elongate-oval. Head bisetose on each side above eye, tooth of mentum rounded, penultimate joint of labial palpi with two median setae and a setule at inner side of apex; prothorax transversely subcordate, lateral margins bisetose, posterior seta a little before basal angle; elytra oval, costate, humeral angles prominent; prosternum plurisetose between coxae, intercoxal declivity concave, mesosternum glabrous between coxae. Black.

Head large (8.5 across eyes), swollen below eyes; genae arcuate-truncate outside base of mandibles, outer angle obtuse but marked; frontal impressions wide, shallow. Prothorax broader than long (7.75 x 10.3 mm.), nitid; surface with faint transverse striolae; sides arcuate on anterior two-thirds, lightly sinuate posteriorly and meeting base at right angles; apex truncate, angles obtuse, not prominent; base emarginate in middle, lightly arcuate on each side; basal angles rectangular, sub-prominent and obtuse at summit; lateral border thick, wide near anterior angles; median and anterior transverse lines lightly impressed; lateral basal impressions wide, foveiform, connected by a well-defined transverse impression. Elytra oval (26 x 13 mm.), lightly convex, lightly and evenly rounded at sides, subopaque, finely shagreened; striae feebly punctate; odd interstices strongly raised (7 strongest), nitid at summits, even ones subconvex, opaque, 3 quadri-punctate on posterior two-thirds, 8 not indicated at apex, 9 a little raised, seriate-punctate; basal border decidedly but obtusely raised at humeral angles. Metasternum not punctate at sides. Abdomen in ♂ 2-, in ♀ 4-setose at apex. Posterior coxae contiguous. ♂, anterior tarsi lightly dilated, weakly squamose beneath three basal joints. Length, 36--38.5; breadth, 12--13 mm.

Hab.—N.S. Wales: Tweed River (Carter and Sloane). Coll. Sloane.

This fine species was first given to me by Mr. H. J. Carter who had taken it on the Tweed River; afterwards I got a single specimen in the brush near Murwillumbah. In size it equals *T. renardi* Chaud., which it resembles so closely that at a casual glance it seems to be conspecific, but an examination shows that it differs greatly by intercoxal declivity of mesosternum glabrous; external angles of genae far more marked (in *T. renardi* the outer side of the genae is similar in its curvature to the lobes of the mentum, in *T. perater* the outer side is squarer and more truncate at apex); prothorax more ampliate anteriorly, anterior angles more widely margined and therefore more distant from neck, transverse impression connecting lateral basal impressions deeper; elytra with eighth interstice not developed at apex, ninth less clearly defined from lateral channel, puncture at base of first interstice wanting; prosternum not longitudinally channelled, but with a wide foveiform impression between coxae; metasternum not punctate at sides; posterior femora narrower, less roundly inflated on lower side; ♂. three basal joints of anterior tarsi far less strongly dilatate, and less squamose beneath.

TRICHOSTERNUS SIMPLICIPES, n.sp.

Elongate-oval, subdepressed. Head lightly bi-impressed, bisetose on each side above eyes, tooth of mentum rounded at apex, penultimate joint of labial palpi bisetose; prothorax truncate-cordate, lateral margins bisetose, posterior seta near basal angle; elytra oval, interstices 1--7 costate, 3, 5 and 7 more raised than others, humeral angles strongly and obtusely dentate; intercoxal parts of

prosternum and mesosternum setose; ♂. anterior tarsi naked beneath. Black, prothorax viridescens on sides, elytra with ninth interstice and lateral channel cupreous.

Head large (5 mm. across eyes); frontal impressions wide, shallow; orbits shortly swollen behind eyes; genae projecting widely from base of mandibles, subparallel at sides, arcuate at apex. Prothorax broader than long (4.3 x 6.3 mm.), widest just behind anterior marginal seta; sides lightly rounded anteriorly, lightly sinuate posteriorly, meeting base at right angles; apex lightly emarginate, angles obtusely rounded, hardly advanced; base emarginate and fringed above peduncle, truncate on each side, not bordered, angles subrectangular; lateral border reflexed; lateral channel narrow; median line lightly impressed; lateral basal impressions elongate, shallow; spaces between these impressions and border flat. Elytra oval (12 x 8 mm.), truncate at base, lightly declivous to sides and apex; striae punctulate; interstices 3 and 5 strongly costate, 7 carinate, 2, 4 and 6 lightly costate, 3 bi-setose on apical half, 9 nitid, narrow, punctate, developed towards apex. Metasternum with one or two punctures near each posterior angle. Abdomen in ♂ 2-, in ♀ 4-setose at apex. Posterior coxae contiguous. Length, 22—24; breadth, 7.4—8.5 mm.

Hab.—Queensland: Bunya Mountain (H. J. Carter). Four specimens have been examined; given to me by Mr. H. J. Carter, who found this species not uncommon at the Bunya Mountain, South Queensland, in October.

Allied to *T. subvirens* Chaud., with which it agrees in the form of tooth of mentum, and in secondary sexual characters; but differing by form narrower; head black; prothorax less metallic; elytra black (excepting margin, cupreous), interstices of disc more unequal, the even ones being less costate than the odd ones.

TRICHOSTERNUS SETOSICEPS, n.sp.

♀. Elongate-oval. Head strongly bi-impressed, 4-setose on each side above eye, tooth of mentum excised at apex, penultimate joint of labial palpi 3-setose on inner side and with two distal setules; prothorax subcordate, disc opaque and transversely striolate, lateral margins bisetose, posterior seta considerably before base; elytra 3-carinate, humeral angles hardly prominent; intercoxal part of prosternum 6-setose, of mesosternum glabrous. Black.

Head large (5.3 mm. across eyes); sides lightly tumid behind eyes; genae projecting widely from base of mandibles, subparallel at sides, roundly truncate at apex; prothorax broader than long (4.5 x 6.4 mm.), widest at anterior marginal seta; sides rounded on anterior two-thirds, sinuate posteriorly and meeting base at right angles; apex lightly emarginate; anterior angles obtuse, a little advanced; base narrowly bordered, lightly truncate-emarginate and with a hair-fringe above peduncle, truncate on each side; basal angles rectangular, obtuse at summit; lateral border nitid, its course interrupted by anterior setiferous puncture; lateral channel wide, finely granulate, opaque; median and anterior transverse impressions strongly marked; lateral basal impressions strongly impressed. Elytra opaque, oval (12 x 8 mm.), a little narrowed to base, lightly convex, strongly declivous at sides; striae distinct, punctate; interstices 3, 5 and 7 carinate (summits nitid), 2, 4, 6 and 8 depressed but a little convex posteriorly, 9 merged with margin; lateral margin wide, nitid; basal border strong, connecting bases of interstice 7 and lateral border with a little nodule at humeral angle. Posterior coxae contiguous. Abdomen 8-setose at apex. Length, 20.5—23; breadth, 6.6—8 mm.

Hab.—Queensland: South Johnstone River (H. W. Brown); Malanda (G. F. Hill). Two specimens (♀) are before me, one is in my collection, the other belongs to Mr. G. F. Hill.

It resembles *T. marginatus* Chaud., in appearance, but is quite distinct from it, and from all other described species, by head with four supra-orbital setae on each side, prothorax opaque and transversely striolate as in *Loxogenius opacipennis* Macl. Its position in the genus is beside *T. cyaneocinctus* Boisd., and *T. superbis* Cast.

NOTONOMUS DEHISCENS, n.sp.

Oval, depressed. Head stout; prothorax cordate-quadrangle, sinuate on sides, basal angles subrectangular, posterior marginal seta in lateral channel at basal angle; elytra complanate, fully striate, interstices lightly convex in ♂, depressed in ♀, 3 with three or four punctures, humeral angles rounded. Black (rarely with a virescent flush on prothorax and elytra); antennae piceous; legs, basal joint of antennae, and mouth parts piceous red.

Head large (4 mm. across eyes); frontal impressions light but distinct; eyes convex. Prothorax broader than long (4.3 x 5.4 mm.), depressed, as wide at base as at apex (4.1 mm.); sides rounded, obliquely narrowed posteriorly, lightly sinuate just before base; anterior angles obtuse; base truncate, angles rectangular, obtuse at summit; lateral border narrow; lateral basal impressions parallel, deep, rather elongate and wide. Elytra truncate-oval (11.2 x 7), dehiscent at apex; lateral apical sinuosities well developed, wide; basal border considerably raised, but joining lateral border at humeral angles without interruption; interstice 10 rather elongate, depressed. Intercostal declivity of prosternum rounded in middle, of mesosternum concave. Apical ventrite in ♂ with one, in ♀ with two punctures on each side. Length, 18—20; breadth, 6—7.2 mm.

Hab.—Victoria: Mounts Hotham and Feathertop. I found it plentifully under logs on the road to Grant (between the sources of the Dargo and Wonnangatta Rivers) at 4,700 feet, and on the slope of Mt. Feathertop (5,000 feet) in February.

Very closely allied to *N. muelleri* Sl., from which it differs chiefly by sides of prothorax sinuate posteriorly, ♂ with apical ventrite unipunctate on each side.* It resembles *N. peroni* Cast., so closely that in my note on *N. peroni* (These Proceedings, 1913, 421), when I knew only the ♀, I took it for a form of that species and recorded it as "*N. peroni*, var. D. Black." Now that the ♂ is known it is seen that in addition to its black colour it differs from *N. peroni* by ♂ with joints 1—3 of the anterior tarsi dilatate and squamose beneath.

* *N. muelleri* has sometimes a faint greenish tinge on the prothorax and elytra. Of seven male specimens which I have examined, five had at each side of the apex of the abdomen two setigerous punctures near together, and two had two setae on one side, but only one on the other. Only two out of nineteen male specimens of *N. dehiscentis* examined, were found to have two setigerous punctures on one side of apex of the abdomen, all the others having one seta on each side. Collecting between Mts. Kosciusko and Hotham may produce intermediate forms showing *N. muelleri* and *N. dehiscentis* to be forms of one species; but, even then, I believe a name for each form will be convenient.

NOTONOMUS HOPSONI, n.sp.

Elongate-oval, convex. Head stout; prothorax cordate, posterior angles not marked, posterior marginal seta distant from base; elytra oval, deeply striate, interstices convex, 3 quadripunctate, 8 narrow, lateral apical sinuosities deep, in ♂ roundly curved, in ♀ semicircular, inflexed margin truncated by apical sinuosities (widely truncated in ♀). Black; elytra varying from an obscure bronze colour to bright-cupreous, often dull purple in ♂.

Head rather large, convex (3.5 mm. across eyes). Prothorax broader than long (4 x 4.4 mm.), widest before middle, narrower at base (2.8 mm.) than apex (3.8 mm.); sides rounded, obliquely narrowed to base, sometimes subsinuate near base; basal angles obtuse; lateral border narrow; lateral basal impressions shallow, wide. Elytra oval (10.3 x 6 mm.), convex, humeral angles rounded; basal border well developed, not dentate, but a little raised above lateral border at shoulders. Intercostal declivity of prosternum rounded, of mesosternum very lightly concave. Length, 16—22; breadth, 5.1—5.4 mm.

Hab.—N.S. Wales: Eccleston. I found this species generally on the Allyn River below the level of 2,600 feet in March, 1921. It is the species I have erroneously recorded as *N. johnstoni* (These Proceedings, 1916, 197) from the lower brushes of the Williams River.

This species belongs to the *N. excisipennis*-group, but differs from the other two members of that group by having the lateral apical sinuosities of the elytra more strongly excised. Comparing the ♀ (no specimen of *N. johnstoni* ♂ is available), the differences of the apical sinuosities readily distinguish it from *N. johnstoni*; in *N. johnstoni* these sinuosities sharply abbreviate the inflexed margin, and are strongly excised, but their backward course is a gentle curve, in which the internal plica is seen as a narrow process; in *N. hopsoni* the inflexed margin is wider at apex, so that it is more decidedly abbreviated, and, owing to the strong outward dilatation of the inner plica, the lateral sinuosity is deeper and forms a more or less semi-circular notch. The apical sinuosity in ♂ is almost as in *N. johnstoni* ♀, but the margin of the elytra round the sinuosity is more curved. The raised process of the apical ventral segment which fits into the apical sinuosity is considerably more developed in *N. hopsoni* than in *N. johnstoni*.

NOTONOMUS ELLIPTICUS, n.sp.

♀. Elongate. Head rather large (3.3 mm. across eyes); prothorax subquadrate, depressed, posterior marginal puncture on inner side of marginal channel near basal angle; elytra deeply striate, interstices convex, 3 bi-punctate, 8 narrow. Nitid, upper surface (including head) cupreous, under surface and legs black; tarsi and antennae reddish-piceous.

Eyes convex, prominent; frontal impressions deep, short, divergent backwards. Prothorax broader than long (4.2 x 4.55 mm.), lightly rounded on sides, wider across base (3.5 mm.) than apex (3.3 mm.); base emarginate in middle, basal angles marked, obtuse at summit; border strongly reflexed, subsinuate just before base, extending along base on each side to lateral basal impressions; these impressions narrow, deep; median line strongly impressed. Elytra oval (10 x 5.5 mm.), depressed on disc; apical curve strongly sinuate on each side; basal border strongly raised and prominent at humeral angles; striae deep, simple; interstices convex, narrow and carinate near apex, 8 narrow, wider than 9 on basal half, 9

very narrow, 10 well developed, extending forward from apical sinuosities half way to base. Intercostal declivity of prosternum flat, of mesosternum lightly concave. Length, 18; breadth, 5.5 mm.

Hab.—Queensland. Two specimens (♀) in British Museum ticketed "Queensland, Challenger Exp." are the types of this species. I have seen a specimen from Booyong, Richmond River, N.S. Wales.

It belongs to the *N. opacicollis*-group of the genus, being allied to *N. wilcoxi* Cast., from which it differs by colour more metallic (including head); size larger; frontal impressions of head deeper; prothorax less narrowed to base; elytral interstices more convex, particularly on apical declivity.

NOTONOMUS CURVICOLLIS, n.sp.

♂. Elongate-oval, convex. Head stout; prothorax transverse, strongly and evenly rounded at sides, posterior marginal seta on border at basal angles; elytra oval, fully and strongly striate, interstice 3 quadri-punctate on posterior two-thirds. Joint 1 of intermediate tarsi 2-spinulose, of posterior 1-spinulose beneath costa of outer side. Elytra virescent, prothorax viridaeneous, head aeneous on front and vertex; under surface and legs black; apex of tibiae, tarsi, and antennae somewhat reddish.

Head convex (3.5 mm. across eyes); eyes roundly convex. Prothorax broader than long (4.4 x 5 mm.), convex; apex and base of equal width (3.35 mm.); sides evenly arcuate; basal angles roundly obtuse; lateral border wide, reflexed; lateral basal impressions short, oval, deep. Elytra oval (11 x 6.2 mm.), convex; ante-apical sinuosities shallow, oval; interstices hardly convex, 8 wider than 9 on basal half, 10 well developed, not long. Intercostal declivity of prosternum rounded and narrow in middle, of mesosternum widely concave. Length, 18.5; breadth, 6.2 mm.

Hab.—Victoria. Unique in Coll. Sloane. I found it in February on the steep side of Mount Feathertop under felled timber at 5,700 feet.

Allied to *N. rainbowi* Sl., *N. banksi* Sl., and *N. aequalis* Sl. It is at once distinguished from *N. rainbowi* by smaller size and green colour. From *N. banksi* it differs by smaller size, prothorax shorter and more strongly rounded on sides. It is about the same size as *N. aequalis*, but differs by prothorax more strongly rounded at sides, interstices of elytra less convex, particularly towards apex, etc.

Tribe *Merizodini*.

Genus PTEROCYRTUS.

PTEROCYRTUS TRUNCATICOLLIS, n.sp.

Stout, elongate-oval. Head stout; prothorax subquadrate, basal angles rectangular; elytra oval, punctate-striate, basal border well developed. Black, border of prothorax and elytra dull red; antennae, mouth parts, and legs reddish; femora reddish piceous.

Head convex (0.9 mm. across eyes); frontal impressions short, wide; clypeus with a foveiform puncture on each side; eyes round, convex, but not prominent, distant from buccal fissure beneath; 2 supra-orbital setae on each side. Prothorax subquadrate (1 x 1.35 mm.), broadest before middle, wider across base than apex; sides lightly rounded anteriorly, lightly oblique posteriorly; anterior

angles obtuse, a little advanced; base wide, truncate; basal angles rectangular but obtuse at summit; border narrow, not extending on to base; lateral basal impressions deep, wide, short, punctulate; space between basal impressions and lateral channel narrow, convex; posterior marginal seta at basal angle. Elytra oval (2.5 x 1.8 mm.), convex, fully striate; striae punctate; discal interstices a little convex, 1 with a short basal striole, 3 tri-punctate, 8 carinate posteriorly. Length, 4.3; breadth, 1.8 mm.

Hab.—Victoria. I obtained three specimens in a dry situation, under moss on a rock, beside the road from St. Bernard Hospice to Grant in the mountains at the source of the Dargo and Wonnangatta Rivers, at 5,000 feet.

I have referred this species to the genus *Pterocyrtus* with doubt; it is the first species from the mainland to be put in this genus, with which it agrees in all characters, except that the head has two supra-orbital setae on each side; the elytra have the basal border strongly developed and reaching to the first interstice, raised but not dentate at humeral angles; there is a short scutellar striole at base of first interstice. It will form the type of a distinct section in the genus. Its narrow subquadrate prothorax and punctate-striate elytra give it quite a different facies from *Brachydema tasmaniae* Sl.

Tribe **Bembidiini.**

Genus TACHYS.

TACHYS SYDNEYENSIS, n.sp.

Oval, convex, laevigate. Two minute setiferous punctures on disc of each elytron. Piceous; legs dull testaceous; antennae infusate, basal joint testaceous.

Head wide, convex; frontal impressions wide apart, shallow, short, parallel. Prothorax transverse, truncate-cordate; sides rounded anteriorly, subsinuate before base; basal angles subrectangular, obtuse at summit; base wide, transversely impressed in middle near edge; lateral basal impressions obsolete; border very narrow, extending on to base on each side. Elytra oval, convex, laevigate, apical striole very short and feebly impressed, three marginal punctures behind shoulders and three on apical curve. Length, 1.4; breadth, 0.6 mm.

Hab.—N.S. Wales: Sydney. Type in Coll. Sloane.

This species was obtained by me in December on the edge of a small pool among the sandy hills near Manly. Two specimens from the Castelnau collection in the Museum of Genoa were sent to me by Dr. Netolitzky, to whom they were returned under the name of "*T. sydneyensis* (cotypes)."

Its nearest allies are *T. australicus* Sl., and *T. captus* Blackb. (also *Tachyta livida* Bates—unknown to me in nature); from all of these it differs in the complete absence of striae on the elytra, and from *T. captus* and *T. livida* by its convex form; in this it resembles *T. australicus*, but differs by the want of the sutural stria; in *T. australicus*, too, the prothorax has the basal angles more acute, and the lateral channel narrower beside these angles.

Tribe **Trechini.**

Genus TRECHUS.

TRECHUS KOSCIUSKOANUS, n.sp.

Oval, rather depressed. Prothorax transverse, much wider across base than apex, base truncate, basal angles rectangular; elytra finely striate, apical striolae

distinct; interstice 3 tri-punctate, two small discal punctures beside stria 3, posterior puncture on apical declivity, basal border extending inwards to base of interstice 3. Black, nitid; femora piceous, tibiae and tarsi ferruginous; antennae piceous, basal joint ferruginous; palpi piceous.

Head large (1 mm. across eyes); frontal sulci curved, strongly impressed but not deep; eyes convex, but not prominent; post-ocular part of orbits small, projecting a little from head. Prothorax broad (1 x 1.3 mm.); anterior angles wide, rounded; sides lightly arcuate anteriorly, hardly narrowed to base; lateral border narrow; lateral basal foveae wide, deep. Elytra broad (2.5 x 1.8 mm.), rather depressed on disc, a little declivous to base; humeral angles marked, and with border strongly raised; base wide, four inner striae distinct, 5—7 faint but perceptible. Length, 3.8—4.5; breadth, 1.65—1.8 mm.

Hab.—N.S. Wales: Mount Kosciusko. Several specimens collected by me on 7th December under stones beside the track to the summit at from 6,800 to 7,300 feet.

A distinct species more allied to *T. robustus* Sl., than to any other, but, comparing it with the description of that species, its smaller size and shining black colour are in themselves sufficient to distinguish it. From *T. diemenensis* Bates it is differentiated by colour; prothorax more transverse, much wider across base, more arcuate on sides, lateral border narrower and less upturned near base; elytra with striae finer, apical striolae not hooked, punctures of third interstice smaller, the anterior puncture beside third stria not interrupting the interstice.

TRECHUS AUSTRALIENSIS, n.sp.

Elliptical-oval, depressed. Prothorax transversely truncate-cordate, basal angles rectangular; elytra finely striate, apical striolae distinct, interstice 3 tri-punctate, two small discal punctures beside stria 3, posterior puncture on apical declivity, basal border extending inward to stria 4. Reddish brown, head and prothorax more reddish than elytra, interstice 1 of elytra usually reddish; legs and antennae ferruginous.

Head large (0.7 mm. across eyes); frontal impressions curved, deep, defining post-ocular part of orbits; eyes convex, but not prominent; post-ocular part of orbits protuberant. Prothorax broader than long (0.65 x 0.85 mm.); base truncate, a little narrower than apex; lateral border rather wide; lateral basal impressions narrow, rather deep. Elytra oval (1.7 x 1.3 mm.), depressed, a little declivous to base; humeral angles rounded; border narrow, three inner striae distinct, 5 and 6 faint. Length, 2.8—3.2; breadth, 1.2—1.3 mm.

Hab.—N.S. Wales: Mount Kosciusko. I collected it on 7th December not uncommonly under stones beside the track to the summit at from 6,800 to 7,300 feet.

More nearly allied to *T. kosciuskoanus* Sl. than to any other species, but differently coloured, much smaller, proportionately narrower; prothorax more narrowed to base, which is not wider than apex. Compared with *T. diemenensis* Bates, it is smaller; prothorax with lateral border less reflexed near base; elytra less strongly striate, anterior puncture of third interstice beside third stria and not interrupting the interstice.

TRECHUS GIPPSLANDICUS, n.sp.

Oval, convex. Elytra much wider than prothorax. Piceous-black; elytra variegated (pattern testaceous), inflexed margin testaceous; femora and base of antennae light coloured.

Head elongate, narrow; frontal impressions deep, curving outwards anteriorly and posteriorly. Prothorax narrow in proportion to elytra, broader than long (1.5 x 1.65 mm.), widest before middle, hardly narrowed behind, wider across base than apex, subdepressed on disc, roundly declivous to sides; basal angles marked, obtuse at summit; base rounded in middle, sloping obliquely inward from each side; marginal channel wide; margin wide, explanate and strongly reflexed at basal angles; basal foveae deep, wide, reaching to lateral channel; median line lightly impressed. Elytra oval (3.6 x 2.5 mm.), convex, lightly depressed on disc, strongly roundly declivous to sides and apex, rounded at sides; shoulders rounded; a light sinuosity at each side of apex; six inner striae strongly impressed, simple, 7 and 8 obsolete (except 8 towards apex); stria 1 entire, curving round apex and extending forward in a short deep course opposite extremity of 5; interstices depressed, 3 tri-punctate (two anterior punctures on disc near stria 3, posterior one at extremity of 2); marginal channel narrow along side, explanate just before apical sinuosity. Length, 5.5; breadth, 2.5 mm.

Hab.—Victoria. Unique in my collection, received from Mr. C. French as from Gippsland.

Allied to *T. subornatellus* Blackb., but larger and with a different elytral pattern. The ground colour of the elytra is piceous; there is a narrow light coloured margin (including interstice 1 towards apex); a testaceous mark extends from a little before the middle of interstice 4 obliquely forward to the side of each elytron, and another similar mark extends across interstices 4—7 a little behind the level of the posterior discal puncture; these two marks unite on interstice 7; interstice 3 has a small plaga in front of the posterior discal puncture. In *T. subornatellus* the testaceous markings form a wavy broken fascia across the elytra above the apical declivity, and there are no testaceous marks on the basal half of the elytra.

TRECHUS BITINCTUS, n.sp.

Depressed. Head arcuately bisulcate, eyes hemispherical; prothorax transversely subcordate, base lobate as in *T. bipartitus* Mael.; elytra truncate-oval, unistriate on each side of suture, each elytron 3-punctate (two discal punctures strongly marked), scutellar striole obsolete, basal border reaching scutellum; abdomen setulose. Upper surface bicoloured; head, prothorax, base and sides of elytra to level with posterior discal puncture rufescent, apex and disc of elytra almost to anterior puncture shining black, with a virescent tinge in some lights; under surface ferruginous, becoming of a lighter shade on abdomen; antennae and legs testaceous.

Head large (0.9 mm. across eyes); frontal sulci deep, curved, strongly divergent posteriorly; median frontal space subconvex, wider than lateral spaces, rather convex. Prothorax rather convex, broader than long (0.8 x 1 mm.), a little wider across basal angles than across apex; sides strongly rounded anteriorly, gently narrowed behind; basal angles prominent, shortly subdentate with apex blunt; basal curve oblique behind basal angles, bisinuate in a well marked open

curve on each side of median lobe; posterior margin of lobe arcuate; anterior transverse impression deep and curved backwards; posterior transverse impression well marked between basal sinuosities; lateral border reflexed. Elytra smooth, suboval (2.1 x 1.5 mm.); base wide; sides subparallel; apical curve short; submarginal stria (8) distinct behind humeral angles, its course interruptedly indicated on posterior third. Length, 3.5; breadth, 1.5 mm.

Hab.—Northern Territory: Adelaide River.

Three specimens have been examined, one belonging to the collection of the British Museum (type, ticketed "Adelaide R., 91—49"), and two others (one in Coll. Sloane) found by Mr. H. W. Brown on the Adelaide River. Closely allied to *T. bipartitus* Mael., from which it differs by its bicoloured elytra. The anterior tarsi in ♂ have the two basal joints dilated with the outer angles dentate.

Tribe Odacanthini.

Six years ago I reviewed the tribe Odacanthini, as represented in the Australian fauna (These Proceedings, 1917, 413). Since then I have obtained a new and remarkable species, for which I believe a new genus is required (*cf. Aulacolius, postea*), and, my views on the generic distribution of our species having undergone considerable modification, I now offer a revised tabulation of our genera, which I hope will enable them to be recognised. Some notes are added after the table to show my altered views with regard to some of the genera.

Table of Genera.

- | | | | |
|----|------|--|----------------------------|
| 1 | (2) | Head not constricted to a neck; eyes at a normal distance from prothorax. | <i>Porocara</i> (1917). |
| 2 | (1) | Head narrowed behind eyes, neck (except rarely) narrow and condyli-form; eyes distant from prothorax. | |
| 3 | (14) | Antennae with joints 1-3 glabrous. Tarsi glabrous on upper surface. | |
| 4 | (13) | Elytra with punctate striae. | |
| 5 | (12) | Antennae with joints 3 and 4 subequal. | |
| 6 | (11) | Tarsi with joint 4 entire. | |
| 7 | (10) | Prothorax not cylindrical, hardly narrower at apex than base, lateral border always present and reaching base. | |
| 8 | (9) | Elytra fully striate. | <i>Dicraspeda</i> (1862). |
| 9 | (8) | Elytra striate on basal fourth, laevigate on apical three-fourths. | <i>Basistichus</i> (1917). |
| 10 | (7) | Prothorax cylindrical, much narrower at apex than base, lateral border short, not reaching base. | <i>Arame</i> (1919). |
| 11 | (6) | Tarsi with joint 4 bifid. | <i>Ophionea</i> (1821). |
| 12 | (5) | Antennae with joint 3 elongate (about as long as 4 and 5 together). | <i>Clarencia</i> (1917). |
| 13 | (4) | Elytra fully striate, striae simple. | <i>Aulacolius</i> (n.g.) |
| 14 | (3) | Antennae with joint 3 setulose. Tarsi setulose on upper surface. | <i>Myrmecodemus</i> (n.g.) |

I do not know Castelnau's genus *Anasis* in nature.

Genus DICRASPEDA.

Chaudoir, Bull. Soc. Imp. Nat. Mosc., 1862, 300. *Eudalia*, Castelnau, Trans. Roy. Soc. Viet., viii., 1868, 102; Bates, Ent. Mo. Mag., 1871, viii., 32.

Formerly, I had not taken the genus *Dicraspeda* into account, but now feel compelled to regard it as synonymous with *Eudalia*, which must be merged with

it. *E. sublaevis* Mael. agrees so well with the description of *D. brunnea* Chaud., from Celebes, that I believe it to be the same thing; there seem no reasons for referring *E. sublaevis* to a different genus from *Odacantha latipennis* Mael., the genotype of *Eudalia*. In These Proceedings, 1917, 414, I gave a synoptic table of the species of *Eudalia*, as then understood by me; all these species may be transferred to *Dicraspeda*, except *Casnonia obscura* Cast., which I would place in *Arame*.

Genus ARAME.

The old magazine-genus *Casnonia* has been shown by Mr. H. E. Andrewes to be invalid (Ann. Mag. Nat. Hist., (9), iii., 1919, 477); at the same time he founded a new genus *Arame*, for some Oriental species which had formerly been placed in *Casnonia*. This genus *Arame* will include *Casnonia obscura* Cast.

Genus OPHIONEA.

The genus *Ophionea* has been given a narrow significance by being confined to those species which have the fourth joint of the tarsi bifid, but it seems very doubtful whether this character should be allowed to restrict the limits of this genus, though this is a matter that does not concern the Australian fauna, the two known Australian species of *Ophionea* having the fourth tarsal joint bifid.

OPHIONEA PUNCTICOLLIS, n.sp.

Elongate. Prothorax elliptical, subcylindrical, lateral border indicated, pronotum and prosternum punctate; elytra with two white ante-apical spots, punctate-striate, interstices depressed; joint 5 of tarsi deeply bifid. Head nigro-cyaneous; prothorax and base and apex of elytra reddish, a wide transverse dark cyaneous band forward from white maculae; legs testaceous, apical third of femora, extreme apex of tibiae, and apices of tarsal joints infusate; antennae infusate, joints 1—4 testaceous.

Head ant-like, convex (1.4 mm. across eyes), roundly-obliquely and rather shortly narrowed to the condyliform neck; frontal sulci wide and distinct between antennae, diverging near eyes and extending to basal third of eyes; a submarginal costa between posterior part of each frontal sulcus and eye. Prothorax narrow (1.7 x 1 mm.), wider at base than apex, transversely impressed near base; sides lightly arcuate in middle, lightly narrowed to apex, shortly subrectangular near base; upper surface punctate and transversely rugose, punctures and rugae more distinct towards sides; apex with a strong narrow border. Elytra parallel (4 x 2 mm.). Length, 8; breadth, 2 mm.

Hab.—Queensland: Burdekin River (type, in Coll. Sloane); Northern Territory: Darwin (G. F. Hill).

Compared with *O. thouzeti* Cast., it differs by colour (base of elytra not cyaneous), head more obliquely narrowed behind eyes, prothorax punctate and with lateral borders developed on anterior half. Compared with the Oriental species known to me (e.g., *O. cyaneocephala* Fabr.), the head is stouter, more shortly and less obliquely narrowed behind eyes, prothorax less rounded at widest part, much less narrowed to apex, etc.

Genus *AULACOLIUS*, n.g.

Head glabrous, diamond-shaped, constricted by an elongate slope to a narrow condyliform neck; antennae with joints 1—3 glabrous, joints 3 and 4 subequal. Prothorax oviform, impunctate—except on the narrow basal part; pronotum gibbous, transversely striolate, impunctate; lateral borders well developed, not reaching base; lateral channel with four or five widely spaced setae on the ampliate part of sides. Prosternum convex, sides visible from above. Elytra ovate, twice as wide as prothorax, fully striate; disc transversely impressed across interstices 2—4; striae entire, simple; interstices equal, 3, 5 and 7 seriatly pluripunctate, the punctures bearing rather long setae, and placed in two rows on outer sides of interstices 3 and 5; four punctures on interstice 1 beside scutellar striole. Tarsi glabrous on upper surface, joint 4 entire.

I do not know any genus to which the species described below as *Aulacolius triordinatus* can be referred. It cannot be placed far from *Lachnothorax*, but is distinct by pronotum and striae of elytra impunctate, head and pronotum without setae, except the fixed ones.

AULACOLIUS TRIORDINATUS, n.sp.

♀. Head diamond-shaped, neck narrow, condyliform; prothorax oviform, longer than broad, ampliate on sides, impunctate except near base, lateral borders well developed; elytra wide, disc transversely impressed near basal third, striae entire, deep, simple, interstices depressed, 3, 5 and 7 pluripunctate, others laevigate. Black; apex and apical half of inflexed margins testaceous; antennae piceous, base more lightly coloured; legs testaceous, coxae and posterior trochanters clear brown, femora at apex, tibiae at base, and apex infuscate; tarsi infuscate; abdomen with segments 5 and 6, also sides of 3 and 4 clear brown.

Head convex, impunctate, glabrous (1.4 mm. across eyes), strongly obliquely angustate to base; eyes convex, prominent. Prothorax a little narrower than head (1.6 x 1.2 mm.), sides roundly ampliate in middle, decidedly rounded anteriorly, strongly narrowed posteriorly, strongly sinuate at posterior fifth; basal part rugose-punctate, defined by a strong transverse impression, lateral border distinct, except behind transverse basal impression, lateral channel well developed and bearing four or five setae on ampliate part of sides; pronotum gibbous, transversely striolate. Elytra truncate-oval (3.3 x 2.6 mm.), declivous to peduncle; apex wide, apical curve short, a little oblique outwards from interstice 4; striae strongly impressed, smooth; an elongate impunctate striole at base of interstice 1; interstices depressed, inner ones a little raised towards apex, odd ones seriatly setigero-punctate, even ones nitid, impunctate; four or five setigerous punctures along outer side of scutellar striole; lateral channel impunctate, inturned to meet stria 8 near base; inflexed margins glabrous, impunctate. Under surface impunctate, except peduncle and base of prothorax. Length, 8; breadth, 2.6 mm.

Hab.—Northern Territory: Darwin. Unique in Coll. Sloane. Mr. Gerald F. Hill found one specimen which he generously presented to me.

This species is at once differentiated from all our other Odacanthides by the striae of the elytra being entire and impunctate.

MYRMECODEMUS, n.g.

Head strongly constricted in a curve to a short condyliform neck; antennae with joint 3 about equal in length to 4, sparsely setulose. Prothorax oviform; base narrow, defined by an encircling sulcus, pronotum gibbous, sparsely setose, bordered on sides; lateral channel with several setae at ampliate part of sides. Prosternum convex, smooth; sides visible from above. Elytra ovate, about twice as wide as prothorax, transversely impressed at basal third, sparsely seriate-setose. Tarsi sparsely setose on upper surface, joint 4 entire.

Genotype, *Casnonia riverinae* Sl.

This new genus is allied to *Selina*, but has the neck short (not forming a very narrow stalk to the head) and the third joint of the antennae not elongate. It is founded on *Casnonia riverinae* Sl., to which *C. globulicollis* Macl., is closely allied, also *Lachnothorax formicoides* Sl. *Lachnothorax palustris* Sl., is very distinct from the three species mentioned, and perhaps is not actually congeneric with them, but it is more in place in the genus *Myrmecodemus* than anywhere else. I was mistaken in referring these four species to the genus *Lachnothorax* in 1917, but the tabulation then proposed will enable them to be recognised. The typical species of *Lachnothorax* have joint 3 of the antennae glabrous.

Tribe Panageini.

Genus CRASPEDOPHORUS.

Hope, Col. Man., ii., 1838, 165; Chaudoir, Ann. Soc. Ent. Belg., xxi., 1878, 90.—*Eudema* Castelnau, Hist. Nat. Ins., I., 1840, 137; Trans. Roy. Soc. Viet., viii., 1868, 145; Chaudoir, *l.c.*, 133.—*Epicosmus* Chaudoir, Bull. Soc. Imp. Nat. Mose., iv., 1846, 512; Ann. Soc. Ent. Belg., xxi., 104; Sloane, Proc. Linn. Soc. N.S.W., 1903, 566.

In his *Essai Monographique sur les Panagèides* (1878) Chaudoir used the three names *Craspedophorus*, *Eudema* and *Epicosmus* as being each entitled to rank as a distinct genus, and in doing so he used *Craspedophorus* rightly, but it is impossible to follow him in his ideas as to the recognition and use of *Eudema* and *Epicosmus*. The facts are, as has been explained by Mr. H. E. Andrewes (Trans. Ent. Soc. Lond., 1919, 126), that *Eudema* Castelnau is synonymous with *Craspedophorus* Hope, while the type of *Epicosmus* is *Carabus angulatus* Fabr., which is erroneously referred to under the name of *Eudema bifasciatum* Fabr. (a name never used by Fabricius) in Chaudoir's monograph, where it forms the only species of the genus *Eudema*. I support Mr. Andrewes's view that both *Eudema* and *Epicosmus* should be sunk as synonyms of *Craspedophorus*.

In These Proceedings for 1903, 566, under *Epicosmus*, I dealt with our species, giving a table of species and proposing three new specific names, but I had too little data then, and now see that my *E. obesulus* is conspecific with *E. rockhamptonensis* Cast., and *E. froggatti* with *E. australasiae* Chand. I now have two new species to describe, and give below a new table of species leading off from *Cr. parvulus* Macl., which is the most nearly related of our species to those of Java and Borneo. It seems to me certain that the Australian Panageini have been derived from the Oriental region.



Table of Australian Species.

- 1 (16) Prothorax with posterior angles rectangular and dentate.
 2 (11) Elytra with maculae orange, or lemon-coloured.
 3 (4) Elytra somewhat lightly furrowed; interstices roundly convex, equal, setose-punctate. 9.5 mm. *parvulus* Macl.
 4 (3) Elytra deeply furrowed; interstices 3, 5 and 7 rather stronger than others.
 5 (8) Elytra with two (rarely one) fixed punctures on interstice 3, maculae reaching to third stria.
 6 (7) Prothorax strongly sinuate-angustate to base. 12-13 mm. *comptus* Laf.
 7 (6) Prothorax not sinuately narrowed to base. 12.5-13.5 mm. *rockhamptonensis* Cast.
 8 (5) Elytra without fixed punctures on interstice 3, maculae reaching to fourth stria.
 9 (10) Head narrow before eyes; elytral interstices evidently setose-punctate. 11-12.5 mm. *angusticeps* Sl.
 10 (9) Head stout before eyes; elytral interstices nitid, hardly punctate, 13.5-15.5 mm. *banksi* Sl.
 11 (2) Elytra with maculae red. (Interstices 3, 5 and 7 more raised than others).
 12 (15) Form oblong, subdepressed.
 13 (14) Elytra with third interstice unipunctate near posterior macula. 15.5-18 mm. *alternans* Cast.
 14 (13) Elytra with third interstice impunctate. 12-14 mm. *mastersi* Sl.
 15 (12) Form oval, prothorax and elytra convex. Interstices 1 and 2 of elytra evidently depressed below 3. 10-12 mm. *australasiae* Chaud.
 16 (1) Prothorax with posterior angles rounded off.
 17 (18) Anterior macula of elytra reaching to third stria. 17.5-21 mm. *insignis* Schaum.
 18 (17) Anterior macula of elytra reaching to fourth stria. 17 mm. *macleyi* Sl.

CRASPEDOPHORUS ANGUSTICEPS, n.sp.

Oval. Head narrow; prothorax small; elytra with interstices very convex, almost equal. Black; four citron-coloured maculae on elytra, anterior pair distant from base, extending across interstices 5—9, posterior pair small, extending across interstices 5—8, uneven on anterior and posterior edges.

Head elongate (1.6 mm. across eyes); frontal part longer than broad (1.3 x 1.2 mm.), finely punctate, laevigate anteriorly. Prothorax broader than long (2.6 x 3.2 mm.), a little convex on anterior part of disc, widest behind middle, strongly narrowed to apex (1.6 mm.), obliquely narrowed to base (2.4 mm.); anterior angles narrow, obtuse; lateral margins declivous anteriorly, widely up-turned posteriorly; lateral border narrow; basal angles subdentate. Elytra convex, oval (6.8 x 4.7 mm.); interstices sparsely setose-punctate, 3—7 subequal, 5 dilated and 4 narrowed at posterior macula. Length, 11—12.5; breadth, 4.5—5.2 mm.

Hab.—Queensland: Mareeba (Sloane), Cooktown (Brown), Coen (Hacker). Type in Coll. Sloane. Twelve specimens have been examined, most of which were found by me under logs beside the railway station at Mareeba in June.

This species is characterised by its small size, narrow head, interstice 3 of elytra without fixed punctures, maculae of elytra pale yellow; the anterior macula is transverse, and consists of five spots across interstices 5 to 9, the spots

on interstices 8 and 9 are longer than the three inner spots; the posterior macula is smaller, and consists of four spots across interstices 5—8, the spot on interstice 6 shortest; the inflexed margins usually have a faint reddish mark near the edge below the anterior elytral macula, but sometimes this mark is absent. The interstices of the elytra are more setose than usual, the setae rising from small punctures on the interstices, but not from the large punctures of the striae.

CRASPEDOPHORUS BANKSI, n.sp.

Elongate-oval, subdepressed. Head wide; prothorax transverse, strongly punctate, subobliquely (roundly) narrowed to base; elytra with interstices subequal. Black; four citron-coloured maculae on elytra, anterior pair extending across interstices 5—9, posterior pair narrow, extending across interstices 5—8, anterior and posterior margins uneven, spots on interstices 6 and 8 shorter than those on 5 and 7, inflexed margin with a reddish mark below anterior macula.

Head stout (2.45 mm. across eyes); frontal part wide (1.6 x 1.7 mm.); frontal sulci punctate; interspace convex, laevigate anteriorly, punctate posteriorly between eyes; antennae elongate. Prothorax transverse (3.5 x 4.5), widest behind middle, lightly convex (but not roundly raised) in middle of disc; sides strongly and roundly narrowed to apex (2.4 mm.), subobliquely and rather roundly narrowed to base (3 mm.); anterior angles rounded; basal angles feebly dentate; median line well marked; lateral basal impressions long, sulciform, placed opposite stria 4 of elytra. Elytra ovate (9 x 5.65 mm.), lightly rounded at sides, lightly sinuate on each side of apex; disc depressed between third interstices; striae very deep, crenulate; interstices 1—8 strongly convex, their summits nitid, 3 without fixed setiferous punctures, 3, 5, and 7 wider than others, 4 decidedly narrowed at posterior macula, 5 swollen on inner side at posterior macula. Length, 13.5—15.5; breadth, 5.4—6.2 mm.

Hab.—Queensland: Cooktown and Upper Normanby River (Sloane), Kuranda (Dodd), Cairns. Type in Coll. Sloane. I found several specimens under Eucalyptus logs on the sides of Mount Cook at Cooktown, and at King's Plains cattle station on the Normanby River.

A large species which differs from *Cr. alternans* Cast., by its shorter and wider head; shorter and wider prothorax, not sinuate on sides posteriorly; elytra with the maculae not extending on to interstice 4, interstice 5 swollen and 4 angustate at posterior macula, the alternate interstices not so much raised above the others. It is very like *Cr. rockhamptonensis* Cast., which it resembles in the colour of the maculae of the elytra, but it differs by antennae longer, the joints after 3 longer and slenderer; prothorax less strongly declivous to sides before middle, lateral margins wider; maculae of elytra not extending on to interstice 4, the posterior macula smaller, more uneven on anterior and posterior margins, the spot on interstice 6 shortest, interstice 5 swollen and 4 angustate at posterior macula.

Tribe **Licinini**.

Genus **DICROCHILE**.

Table of Australian Species.

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| 1 | (4) | Elytra with third interstice 3-punctate. | |
| 2 | (3) | ♀. Elytra nitid. | <i>D. quadricollis</i> Cast. |
| 3 | (2) | ♀. Elytra opaque, shagreened. | <i>D. ventralis</i> Blackb. |
| 4 | (1) | Elytra with third interstice 2-punctate. | |

- 5 (6) Striae of elytra deep, crenulate. *D. goryi* Boisd.
 6 (5) Striae of elytra simple.
 7 (12) Interstices of elytra not punctulate.
 8 (11) Size moderate. 12 mm.
 9 (10) Prothorax transverse (2.5 x 3.4 mm.); striae of elytra shallow, interstices flat, nitid in ♂, opaque in ♀. *D. minuta* Cast.
 10 (9) Prothorax quadrate (2.3 x 3 mm.); striae of elytra deep, interstices convex, nitid in both sexes. *D. brevicollis* Chand.
 11 (8) Size large; elytra nitid in ♀. 21 mm. *D. gigas* Cast.
 12 (7) Interstices of elytra punctulate *D. punctulata* Sl.
 I have not been able to identify *D. montana* Cast., *D. punctatostriata* Cast., and *D. punctipennis* Cast.

DICROCHILE PUNCTULATA, n.sp.

♀. Elliptical, depressed. Prothorax transversely cordate; elytra lightly striate, interstices depressed, punctulate, 3 bi-punctate beside stria 2. Black, nitid.

Head transverse-quadrate (2.75 mm. across eyes); front concave; eyes prominent, hemispherical. Prothorax transverse (2.5 x 3.6 mm.), wider across apex (2.75 mm.) than base (2.63 mm.), nitid on disc, a little rough and minutely punctulate towards sides; margins wide, reflexed (strongly so posteriorly); lateral basal impressions wide; basal angles obtuse. Elytra parallel-oval (9 x 5.5 mm.); striae fine, subcrenulate; interstices flat, rather closely covered with small punctures, these punctures more numerous on even than on odd interstices. Ventral segments 3—5 setigero-punctate on each side of middle. Length, 14.5; breadth, 5.5 mm.

Hab.—Northern Territory: Darwin. Unique in Coll. Sloane. Kindly given to me by Mr. G. F. Hill; I have seen other specimens from East Alligator River in the National Museum, Melbourne.

It is distinguished from all other Australian species of the genus by the punctulate interstices of the elytra; the puncturation is denser (about 4 rows) on the even interstices; on the odd interstices it has a tendency to be arranged in two rows, one along each side of the interstice. Its affinity seems to be with *D. gigas* Cast., which it resembles in shape of head and prothorax.

Tribe **Lebiini**.

XANTHOPHOEA WILSONI, n.sp.

Narrow, elongate. Prothorax sinuate posteriorly, basal angles rectangular; elytra lightly narrowed to base; third interstice 3-punctate. Elytra brown, interstices 2, 4 and 6, and lateral margin of a dull testaceous colour, brownish near apex; prothorax testaceous at sides, brownish on disc; head testaceous, sometimes rather brownish on vertex; under surface testaceous, abdomen brownish; legs and antennae testaceous.

Head convex (1.15 mm. across eyes), obliquely narrowed behind eyes, setulose on vertex and beside eyes. Prothorax broader than long (1.1 x 1.4 mm.), depressed and explanate at sides, lightly convex on disc, sparsely covered with small setules arising from very small punctures; sides lightly rounded on anterior two-thirds, sinuate posteriorly and meeting base at right angles; basal angles rectangular. Elytra subparallel, widest about apical fourth (3.5 x 2 mm.), subdepressed on disc, strongly declivous at sides from interstice 7, lightly declivous

to base and apex; striae deep, finely crenulate; interstices subconvex, minutely, but sparsely, setulose punctate, 3 with three strong punctures, 5 and 7 with some punctures stronger than others along outer side. Under surface (including prosternum and metasternum) sparsely setulose. ♂ with one, ♀ with two setae at each side of apex of abdomen. Length, 5.7—6.5; breadth, 2 mm.

Hab.—Victoria: Mount Donna Buang, 4,080 feet. Colls. Wilson and Sloane. Mr. F. E. Wilson sent me four specimens taken by him in tussocks of grass on Mt. Donna Buang, near Warburton.

This is a very distinct species, more allied to *X. infuscata* Chaud. than to any other described species, but easily distinguished by size smaller; head more convex, neck thicker; prothorax somewhat similar in shape, but with basal angles less prominent; elytra differently coloured. The longitudinally striped pattern of the elytra is peculiar to this species.

XANTHOPHOEA CARTERI, n.sp.

Narrow, elongate, depressed. Prothorax sinuate posteriorly, basal angles rectangular; elytra lightly narrowed to base, interstices 3, 5 and 7 bearing fixed setae. Testaceous, disc of prothorax with an infuscate plaga on each side, elytra 3-vittate, central vitta on interstice 1 of each elytron, lateral vitta on interstices 6—8, an oblique broken fascia of piceous spots on each elytron from posterior third of lateral vitta to apex of sutural vitta; under surface wholly testaceous.

Head convex (1.26 mm. across eyes), obliquely narrowed behind eyes, setulose; joint 3 of antennae finely setulose. Prothorax broader than long (1.25 x 1.45 mm.), depressed and explanate at sides, lightly convex on disc, sparsely covered with small setules arising from very small punctures; sides rounded on anterior two-thirds, sinuate posteriorly; basal angles acute. Elytra widest about apical fourth (3.8 x 2.2 mm.); striae deep, crenulate; interstices hardly convex, distinctly punctate, 3 bearing six, 5 four, and 7 three strong punctures with macrochaetae. Under surface, including prosternum and metasternum, sparsely setulose. ♂, with one seta at each side of apex of abdomen. Length, 6.5; breadth, 2.2 mm.

Hab.—N.S. Wales: Gosford (Carter), Wahroonga (Sloane). Type in Coll. Sloane. I first received this species from Mr. H. J. Carter; subsequently I found a specimen in July, hiding in the leaves of a grass-tree (*Xanthorrhoea hastilis*).

A distinct species allied to *X. wilsoni* Sl., from which it differs by size larger; basal angles of prothorax more acute; elytra more coarsely punctate, pattern different, interstices 2—5 testaceous on anterior two-thirds, and each with a small piceous spot on apical third (the spot on 2 united with the apex of the sutural vitta, that on 5 united with external vitta, that on 3 placed obliquely between those on 2 and 5, that on 4 opposite that on 2).

XANTHOPHOEA PARALLELA Chaudoir.

(= *X. ornata* Sloane.)

I now feel no doubt but that *X. parallela* Chaud., (1872), is the same species as the one I subsequently named *X. ornata* (1910). It probably has a wide range; I described it from specimens found hiding in the leaves of the grass-trees at Berowra, near Sydney; there are specimens in the Macleay Museum ticketed King George's Sound.

XANTHOPHOEA LONGICOLLIS Macleay (1864).

(= *X. ferruginea* Chaudoir, 1872 = *Demetrius rufescens* Macleay, 1887).

There seems to me no doubt but that *Cymindis longicollis* Macl. is the same thing as *X. ferruginea* Chaud. and *Demetrius rufescens* Macl. It ranges from the Hunter River at least as far north as Cooktown. It is always obtained by being beaten from the foliage of shrubs.

XANTHOPHOEA TRIVITTATA, n.sp.

♀. Elongate. Head convex, obliquely narrowed behind eyes, impunctate, antennae with three basal joints pubescent; prothorax subquadrate, sides emarginate posteriorly, basal angles rectangular, disc impunctate; elytra parallel, crenulate-striate, interstices punctulate, 3 unipunctate about apical third; apex of abdomen (♀) 4-setose; tarsi setulose on upper surface. Testaceous, elytra paler than head and prothorax; disc of prothorax with a black plaga on each side; elytra with three black vittae, central vitta on interstices 1 and 2, extending to apical sixth, lateral vittae on interstices 6—8, extending to extremity of 7, apex of abdomen infusate.

Head stout (1.7 mm. across eyes), transversely impressed posteriorly; orbits well developed and oblique behind eyes. Prothorax slightly broader than long (1.8 x 2 mm.), a little wider across base (1.65 mm.) than apex (1.5 mm.); apex truncate, anterior angles obtuse; sides lightly rounded, lightly sinuate posteriorly; base bisinuate, squarely truncate on each side, basal angles rather prominent; lateral margins wide, punctate; anterior marginal seta before middle at widest part, very near edge; median line strongly impressed. Elytra subparallel, a little narrowed from posterior third to base, much wider than prothorax (5.5 x 3.2 mm.); apex arcuate-truncate, external angles rounded off; interstices lightly convex, punctation stronger on interstices 6—8 than on others. Length, 8—9.5; breadth, 3.2 mm.

Hab.—Queensland: Stradbroke Island (H. J. Carter). I have examined three specimens given to me by Mr. H. J. Carter; owing to the two smaller specimens having their elytra spread I have only been able to measure the width of the largest specimen.

A distinct species allied to *X. parallela* Chaud., from which it differs greatly by smaller size, head more strongly narrowed and not black behind eyes; prothorax more rounded on anterior part of sides, more strongly sinuate posteriorly, basal angles much more sharply marked, lateral channel much deeper, lateral border more widely and strongly reflexed; sutural vitta of elytra not reaching apex.

Genus PHLOEOCARABUS.

PHLOEOCARABUS PARVICEPS, n.sp.

Elongate-oval, depressed, upper surface glabrous. Head small, strongly constricted to a narrow neck; prothorax narrow, subquadrate; elytra lightly narrowed to base, lightly striate. Brownish testaceous; elytra with a wide infusate fascia on apical half, this infuscation extending rather faintly forward along suture to base and spreading over interstices 1—4 near base, apex and a narrow lateral margin (including interstice 9) testaceous; head, antennae, and tarsi reddish.

Head obovate (1.23 mm. across eyes), depressed, very finely shagreened and microscopically punctate, strongly roundly-obliquely constricted behind; eyes prominent, rounded continuously with the curve of the posterior part of orbits. Prothorax depressed, subquadrate (1.25 x 1.65 mm.), ampliate behind apex, subparallel on sides, broadest at anterior third, wider across base than apex, finely shagreened; disc very finely transversely striolate; lateral margins wide; lateral basal impressions wide, concave; sides very little narrowed posteriorly, subsinuate before base; median line distinct; base lightly arcuate in middle, lightly oblique on each side; angles marked, but obtuse at summit. Elytra subquadrate with angles rounded (4.2 x 2.85 mm.), widest about middle; sides lightly rounded; apex wide, truncate in a light curve; striae fine, shallow, crenulate; interstices depressed, shagreened, sparsely microscopically punctate, 3 bipunctate, the punctures small (one just before, the other just behind the dark fascia), punctures of 9 small, not numerous, interrupted in middle. Length, 7.7; breadth, 2.85 mm.

Hab.—N.S. Wales. Type in British Museum ticketed "Illawarra, G. E. Bryant, 2.x.08." I have seen it from the Blue Mountains.

This species has somewhat the appearance of a species of *Xanthophoea*. The head is unusually small, and the prothorax unusually narrow, comparing it with *Ph. mastersi* Macl., it differs conspicuously by these characters, amongst others. It seems to come near *Diabaticus collaris* Black., (unknown to me in nature) but evidently is differently coloured, and I expect it will prove to have the head smaller, neck narrower, prothorax less narrowed to base and less sinuate on the sides. Owing to the upper surface being shagreened its colours are rather dull.

Genus AGONCHILA.

AGONCHILA OVALIS, n.sp.

Oval, rather convex. Head and prothorax piceous brown; elytra black and flavous, the flavous area covering most of the disc, irregular on outer margin, broken into along basal part of suture and on middle of each side by intrusions of the black circumferential area; a narrow broken zig-zag fascia extending backwards in a faintly marked course across disc of elytra between inner sides of lateral intrusions from black area, lateral channel flavous; legs and antennae testaceous.

Head smooth, with a few microscopic punctures. Prothorax transverse, much wider across base than apex, ampliate behind the widely rounded anterior angles, sparsely covered with short fine hairs; disc rather convex; sides explanate, finely punctate, not angulate at position of lateral seta, lightly obliquely narrowed to base; basal angles subrectangular, obtuse at apex. Elytra lightly convex, oval, densely and finely setulose-punctate; apex wide; striae not marked, but interstices perceptible on disc. Length, 4; breadth, 1.75 mm.

Hab.—Queensland. Type in British Museum ticketed "Kuranda G. E. Bryant 1.vii.09."

It is not unlike a species found by Dr. E. Mjöberg on the Bellenden Ker Mountains, which I have named *A. intricata*, but differs by having the discal flavous area of the elytra less decidedly divided by a distinct broken black fascia; size larger; head and prothorax less strongly punctate, prothorax with anterior angles more widely rounded, lateral margins much wider. It may be noted that the flavous discal area almost touches the lateral margin about apical fifth.